PATENT

FRENCH PETROLEUM INSTITUTE

Catalyst and Process for Hydrocracking Hydrocarbon-Containing Feedstocks

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ABSTRACT

This invention relates to silico-aluminum substrates, catalysts, and the hydrocracking and hydrotreatment processes that use them. The catalyst comprises at least one hydro-dehydrogenating element that is selected from the group that is formed by elements of group VIB and group VIII of the periodic table and a non-zeolitic silica-alumina-based substrate that contains an amount of more than 5% by weight and less than or equal to 95% by weight of silica (SiO_2) and has the following characteristics:

- A mean pore diameter, measured by mercury porosimetry, encompassed between 20 and 140 Å,

- a total pore volume, measured by mercury porosimetry, encompassed between 0.1 ml/g and 0.6 ml/g,
- a total pore volume, measured by nitrogen porosimetry, encompassed between 0.1 ml/g and 0.6 ml/g,
- a BET specific surface area encompassed between 100 and 550 m^2/g,
- a pore volume, measured by mercury porosimetry, encompassed in the pores with diameters of more than 140 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, encompassed in the pores with diameters of more than 160 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, encompassed in the pores with diameters of more than 200 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, encompassed in the pores with diameters of more than 500 Å, of less than 0.01 ml/g,
- an X diffraction diagram contains at least the main lines that are characteristic of at least one of the transition aluminas contained in the group that consists of the alpha, rho, chi, eta, gamma, kappa, theta and delta aluminas.